flustix RECYCLED

Module A Chemical Recycling

Supplement to the flustix RECYCLED Certification Scheme 3.0, 01. Nov 2026

Requirements for evidence, mass balance and allocation of chemically recycled plastics



Version 1.0 · As at 01 October 2026

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Document information

Attribute	Details
Document	Module A Chemical Recycling
Edition	Version 1.0 dated 18 October 2026
Reference scheme	flustix RECYCLED Certification Scheme, Version 3.0 dated 18 October 2026
Status	Developed version for technical approval
Applicability	From publication by flustix, together with the main scheme

Purpose of this document

This module contains only the additional requirements for chemical recycling. It links the general rules of the main scheme with the necessary requirements for process evidence, eligible inputs, allocation, independent assessment and accurate recycled content claims. It shall not be applied as a stand-alone certification scheme.

Revision history

Version	Date	Responsible	Content
1.0	18 October 2026	flustix	First edition: physical evidence route, mass balance with allocation and integration into main scheme 3.0 (Sections 1, 5–9) Upstream certifications and percentage reference bases (Sections 6.2, 7.6) Official corrigenda, statutory calculation for mixed recycling routes, balance carry-overs and worked examples (Sections 2.1, 5.2, 7.5; Annex MA2) Voluntary geographical origin verification under main scheme 6.5 (Sections 1.2, 6.3)

Publisher

flustix GmbH · Kronprinzendamm 20 · 10711 Berlin
Managing Director: Malte Biss
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1 Scope and integration

This module supplements the flustix Certification Scheme for the award of the flustix RECYCLED mark, Version 3.0 dated 18 October 2026, with the specific requirements for chemical recycling of plastics. It applies to chemically recycled materials, intermediates, polymers and the semi-finished goods, products and packaging manufactured from them within the defined certification scope.

It covers processes that alter the chemical structure of the plastic, such as depolymerisation, solvolysis and thermochemical conversion, including subsequent treatment and renewed polymer production. Upstream collection and sorting, and downstream processing and trading, are included insofar as they affect the origin, quantity or transfer of the verified recycled content. Solvent purification alone without alteration of the polymer structure and mechanical recycling are generally governed by the main scheme; processing of materials already allocated through mass balance remains within the scope of this module.

The module verifies traceability and the recycled content determined under the applicable evidence route. Fuel production and energy recovery do not give rise to eligible recycled content. This does not constitute verification of recyclability, general environmental superiority or suitability for food contact.

1.1 Relationship with the certification scheme

This module shall be applied exclusively together with the main scheme. General requirements are incorporated as binding requirements through the sections of the main scheme listed below and are supplemented only by the chemical recycling rules in this module. For mass balance with allocation, the requirements expressly specified herein apply instead of a restriction to the controlled blending model. Mandatory law takes precedence. Binding incorporation is specified in Sections 1 and 2 of the main scheme. Any legally required evidence of compliance with PET recycled content targets is also governed by Section 6.2 of the main scheme outside this module.

Subject	Binding reference in the main scheme
Terms and technical basis	Sections 2 and 3
Certification bodies and auditors	Section 4
Products and food contact	Sections 5.1 and 5.2 and Annex A 1.1
Traceability and upstream certificates	Section 6
Audits and reports	Section 7
Certification and nonconformities	Section 8
Internal monitoring and quality assurance	Section 9
External surveillance	Section 10

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The separate Module A Chemical Recycling is distinct from the existing Annex A of the main scheme. Section references without the qualification “main scheme” refer to this module. No stand-alone certificate without reference to the main scheme shall be issued on the basis of this module.

1.2 Evidence routes and certification scope

Before the audit, the physical evidence route or mass balance with allocation, and the intended use, shall be specified for each material stream. A certification scope may include both evidence routes, provided their quantities and claims remain separately traceable. Requirements shall be limited to the activity actually performed; any inapplicable requirement shall be identified and justified in the audit report.

Where a claim of eligibility towards a statutory recycled content target is intended, the specific legal act, product category, calculation period, applicable reference mass and geographical conditions shall additionally be documented. Voluntary flustix certification alone does not constitute regulatory authorisation and does not replace any legally required verification evidence.

Upon application, Section 6.5 of the main scheme shall additionally apply to voluntary geographical origin verification, including any commissioned French origin criteria. The scope shall be recorded in the main audit report; this module does not establish a separate obligation to obtain additional confirmation of origin.

2 Basis for assessment and certification

The basis specified in Section 2 of the main scheme applies, in particular DIN EN 15343, ISO 22095 and DIN EN ISO 14021 in the editions cited therein. ISO 22095 provides the chain of custody framework. Mass balance allocation under this module shall be distinguished from evidence of physically present recycled content under DIN EN ISO 14021.

2.1 Legal basis and limits of applicability

Basis	Relevance to this module
Directive 2008/98/EC, in particular Article 3(17)	Distinction between recycling and energy recovery or fuel production
Implementing Decision (EU) 2026/1425, in particular Articles 1 and 5 to 8 and Annexes IV and V	Calculation, mass balance and verification within the statutory scope for single-use PET beverage bottles; methodological basis of this module for allocation
Regulation (EU) 2025/40, in particular Article 7	Packaging recycled content targets and associated calculation, sustainability and third-country rules, subject to their respective applicability
Regulations (EC) No 1935/2004 and No 2023/2006, (EU) No 10/2011 and (EU) 2022/1616	Additional requirements for intended food contact under the applicable conformity route
REACH and applicable waste, installation and shipment legislation	Lawful manufacture, material classification, substance compliance and cross-border movements of materials

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The legal position reflected in this edition is that of 18 October 2026. Implementing Decision (EU) 2026/1425 is applied including the corrigenda in Official Journal L 2026/90601 of 20 July 2026 and L 2026/90635 of 31 July 2026. Its statutory calculation and verification methodology concerns single-use PET beverage bottles within its scope. For other products, the allocation rules incorporated into this module are flustix scheme requirements; this does not confer automatic statutory recognition for other recycled content targets.

Article 7 of Regulation (EU) 2025/40 provides for separate supplementary legal acts. Drafts shall not be treated as calculation rules in force. Before a corresponding statutory conformity claim is made, the rules then in force and applicable shall be assessed for the specific product. Neither this module nor a decision of the scheme owner may replace divergent binding provisions.

Official sources: EU 2026/1425 · EU 2025/40 · EU 2022/1616

2.2 Geographical conditions for statutory eligibility

Voluntary flustix certification is not limited to the European Union. However, eligibility under Implementing Decision (EU) 2026/1425 additionally requires evidence of compliance with its geographical conditions. Up to and including 20 November 2027, eligible plastic material shall have been produced through recycling, including sorting, within the Union. From 21 November 2027, the third-country routes referred to in Article 1(1) may additionally apply under the conditions specified therein; no blanket recognition of all third-country recyclates is granted.

The countries in which the relevant recycling and sorting steps take place shall be documented throughout the supply chain. Where a quantity does not meet the geographical conditions for a statutory target, it shall be excluded from the calculation maintained for that purpose. Any permissible voluntary certification claim shall be maintained separately and shall not assert statutory eligibility.

3 Supplementary terms and definitions

The terms PCR, PIR, batch, recycled content and traceability are governed by Section 3 of the main scheme. The following terms additionally apply.

Term	Meaning
Physical evidence route	The recycled content in the respective output is known from the actual material flow and appropriate process evidence; it is not derived from an earlier mass balance allocation
Eligible material	For allocation under this module: post-consumer plastic waste and material derived from it, with demonstrated origin and quantity; further statutory conditions additionally apply to the respective target claim
Allocated quantity	The mass of eligible material attributed to a specific output within a balancing period under the rules of this module

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Term	Meaning
Calculation point	A point in the supply chain at which the quantity of eligible material is determined; in particular upon a change in chemical or physical composition or upon mixing
Installation or facility	One or more production plants at the same site under the management of the same economic operator, including the associated infrastructure; separate sites do not constitute a common balance boundary
Recycling pathway	The successive processing steps throughout which the possibility of further material processing into a non-fuel is maintained
Dual-use output	An output stream that may be used for material purposes or as fuel, depending on its further processing
Reallocation	A distribution, following initial allocation, of permissible allocated quantities to other suitable outputs at the same calculation point, subject to the limits in Section 7.4

4 Requirements for independent bodies

Section 4 of the main scheme applies. The certification body shall be accredited to ISO/IEC 17065 and technically competent for the tasks undertaken. It is responsible for the education and training of its auditors in the flustix RECYCLED Certification Scheme, including this module. flustix does not provide separate mandatory auditor training.

Relevant prior education, practical experience, scheme-specific training and authorisation shall be documented before first assignment. The audit or technical assessment team shall collectively possess demonstrated competence in the chemical processes assessed, process yields, allocation rules, supply chain evidence and applicable legislation. Technical experts may additionally be engaged; the certification body retains responsibility.

Where statutory verification is performed at the same time, the applicable additional requirements for verifiers, accreditation, the relevant standard and independence shall also be met. General ISO/IEC 17065 accreditation or flustix recognition alone does not replace this assessment of the specific verification scope.

5 Requirements for products and materials

5.1 Eligible inputs and separate origin declarations

For each input, the material type, waste origin, supplier, batch, quantity, receipt date and any quantity already allocated shall be evidenced. PCR, PIR, virgin material and other ineligible constituents shall be recorded separately. For mixtures, only the eligible proportion supported by robust evidence may be counted; unknown or insufficiently evidenced quantities shall be set to zero. For statutory target claims, the PCR classification shall additionally comply with the definition in the respective legal act; for Implementing Decision (EU) 2026/1425, this is Article 1(2).

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Under the allocation route of this module, only evidenced post-consumer plastic material shall be booked as eligible. PIR, biogenic feedstocks, CO_2-based feedstocks and virgin material may be processed together with it but shall not increase this PCR allocation balance. Physically evidenced PIR remains certifiable under the main scheme and the physical evidence route of this module and shall be declared separately. General evidence of “circular”, “bio” or “bio-circular” status does not, on its own, demonstrate a PCR proportion.

Internal returns, rework and process side streams shall not constitute a new eligible input upon re-entry. Existing attributes shall be carried forward without multiple counting. Non-plastic constituents, contaminants, moisture and recovered processing aids shall not be counted as newly produced plastic recyclate. Measurement and calculation bases shall represent the actual relevant material mass in a traceable manner.

Lawful acceptance and processing of the material, required installation permits and the waste or product classification of intermediates and outputs shall be evidenced. The general environmental, substance, occupational and social requirements of the main scheme apply to the certified scope of activities.

5.2 Physical evidence route and mass balance with allocation

Where the proportion of eligible material in the output is known and no mass balance with allocation has been applied to that quantity in the upstream chain, the corresponding recycled quantity shall be determined for each output batch from the known mass fraction and the batch mass. Process yields, additional raw materials and losses shall be included. Physical origin may be evidenced through segregated material flows or demonstrated controlled blending; analytical identifiability of the recycled molecules alone is not a prerequisite.

Where the proportion in the respective output is not known, or the input already originates from mass balance with allocation, the rules in Section 7 apply. Once this evidence route has been introduced for a quantity, that quantity shall continue to be carried as allocated in subsequent stages. Extrusion, mixing, polymerisation or analytical testing alone shall not convert it into physically evidenced recycled content. Inputs independently evidenced as physical may continue to be recorded separately.

For statutory PET evidence, Article 5(4) of Implementing Decision (EU) 2026/1425 applies where recycling routes are mixed. Article 6 shall apply from the point of mixing; where allocation has already occurred in the material chain concerned, the statutory PCR value shall be calculated under Article 6(3) and Article 7. Physically evidenced PCR inputs shall be counted only once in that calculation. Separate voluntary presentation of evidence types does not replace this calculation.

5.3 Food contact materials and products

For intended food contact applications, Section 5.2 and Annex A 1.1 of the main scheme apply. The specific legal conformity route shall be determined on the basis of the process and the substances produced. Neither a mass balance nor a recycled content certificate replaces legal substance admissibility or the required purity, migration, GMP or conformity evidence.

Chemical recycling does not invariably require authorisation under Regulation (EU) 2022/1616. In particular, its exemption under Article 1(3) for the manufacture of the substances specified therein for subsequent use under Regulation (EU) No 10/2011 shall be assessed. Where this route is used, compliance with its conditions, including the applicable substance admissibility and purity requirements, shall be evidenced. Where Regulation (EU) 2022/1616 applies, the registrations, authorisations or requirements for novel technologies required for the process shall be evidenced.

An audit may take place under Section 7.3.1 of the main scheme while a regulatory authorisation procedure is still pending. Outstanding authorisation and conformity matters shall be documented. A certificate with a food contact scope shall not be issued or extended accordingly until the required authorisation is available and all applicable requirements have been positively assessed. The final review of evidence may be document-based where the other audit evidence remains current and no relevant changes have occurred; the waiting period alone does not trigger a full repeat audit.

6 Traceability requirements

6.1 Process boundaries and calculation points

In addition to Sections 6 and 7.2 of the main scheme, a process flow diagram shall be maintained. It shall identify the facilities, operators, inputs, processing steps, storage locations, outputs, returns and relevant losses involved. The chain from evidenced plastic waste to certified output shall be closed through material and documentary links.

A calculation point shall be established at every relevant change in chemical or physical composition, including mixing with virgin material, other recyclates or additives. For each calculation point, the method, responsible person, data sources, conversions and links to upstream and downstream quantities shall be specified. An aggregated site balance shall not obscure required subsidiary calculations or the exclusion of fuels or losses.

Quantity accounting and allocation shall be facility-specific. Allocated quantities shall not be transferred between sites or companies without the associated physical material delivery. Physical transport of material carrying an unchanged allocated quantity is permissible with complete delivery documentation. Separate transfer, marketing or offsetting of allocation credits across facility boundaries is excluded.

6.2 Supplier evidence and recognition of existing certificates

Existing recognised upstream certificates and audit evidence may be taken into account under Section 6.4 of the main scheme. The scheme owner decides on general recognition of a scheme and the recognised scope, where appropriate in consultation with the certification body. The certification body concerned independently assesses whether the evidence submitted is sufficient for the material, facility, activity, period and method applied.

The evidence route actually verified shall also be assessed where ISCC PLUS or RecyClass evidence is available. Freely chosen allocation permissible under a voluntary scheme, an energy-based credit, a cross-site credit transfer or an undifferentiated “circular” proportion shall not automatically be converted into an eligible PCR quantity under this module. Additional evidence required shall be limited to requirements not already covered equivalently. Supplier percentages shall additionally be

reconciled with the reference mass under Section 7.6; a different calculation basis shall not be adopted without assessment.

All quantities counted under the allocation route shall be fully supported by origin, quantity and transfer evidence. The tiered supplier evidence rule of the main scheme does not permit unsupported quantities to be counted or legally required verifications to be deferred. An additional flustix audit of every upstream entity is not required where equivalent, current and verifiable evidence is available. This module does not require additional management system certification of suppliers.

6.3 Batch-specific transfer of information

Each delivery with a verified physical or allocated proportion shall be unambiguously linked to the associated evidence. Transfer documentation shall include at least the following information.

- Supplier and recipient, and the dispatching facility
- Material designation, batch or unique transaction identifier, delivery date and physical delivery mass
- Evidence route and, where applicable, allocation model applied
- Physically evidenced PCR and PIR quantities or their proportions, where present
- PCR quantity allocated through mass balance and the corresponding proportion, and the associated balancing period
- References and validity of the relevant certification and verification evidence
- For statutory target claims, the required origin and country information and the quantity eligible for that purpose

The physical delivery mass and the allocated quantity linked to it shall not be confused. The quantity transferred shall be debited from the supplier's account and credited to the recipient's account with unchanged origin and evidence type. Trading alone shall not create a new allocated quantity.

Where Implementing Decision (EU) 2026/1425 applies directly, the declarations under Article 8(3) and the applicable Parts A, B or C of Annex V shall be used. Required verification certificates shall be passed on under Article 8(10). Traders who do not alter the composition and do not mix may pass on the declarations received; for partial quantities, the quantities passed on shall be unambiguously attributed. Licensing and traceability obligations under the main scheme remain applicable.

Where origin verification under Section 6.5 of the main scheme has been commissioned, the evidenced collection and processing locations shall be passed on with the associated quantities and evidence references. For mixtures, partial quantities and allocation, evidenced origin proportions, yields and losses shall be tracked; unknown origin shall not be relabelled. Neither a change of site nor an allocation account may create geographical origin. Reference may be made to the site overview in the main audit report or equivalent controlled records.

7 Mass balance and allocation

The requirements of this section apply to the allocation route. The physical material balance and the account of allocated quantities shall be maintained separately and reconciled. All calculations shall use consistent mass units and shall be traceable on the basis of representative, process-specific operating data. An energy-based credit does not replace the mass-based calculation required by this module.

7.1 Determination of eligible inputs and initial allocation

At each calculation point, the eligible input mass shall be determined from valid delivery declarations or traceable internal records. Physically known input proportions shall be calculated from the evidenced proportion and the mass actually used. For inputs already allocated, only the permissible quantity transferred with the delivery shall be adopted. Withdrawals from storage, processing aids and process returns shall be distinguished so that they do not artificially increase the available quantity.

Unless Section 7.2 requires a special calculation route, the eligible input mass shall first be distributed proportionally across all actual outputs, including fuels and losses. Before application of the dual-use factor, the relative eligible proportion in each output shall equal the eligible proportion in the total relevant input. The complete material balance shall also account for additional ineligible reactants, by-products and relevant inflows and outflows.

For this proportional step, on a consistent balance basis: $s = E / I$; $A_i = s \times O_i \times f_i$. E is the eligible input mass, I the total relevant input mass, O_i the mass of the respective output, f_i its factor under Section 7.3, and A_i the allocated quantity remaining after deduction of excluded uses. Inventory changes shall be reconciled before applying the calculation. The example in Annex MA2 illustrates this step.

Conversion and consumption factors shall reflect actual process yields, losses and chemical relationships. Purely theoretical yields without operational confirmation or factors from unsuitable installations are insufficient. Allocated quantities shall exceed neither the available eligible mass nor the technically feasible output quantity actually produced.

7.2 Special calculation route for liquid inputs to steam crackers

The special route under Article 7(3) and (4) of Implementing Decision (EU) 2026/1425 applies to the first calculation point of a recycling pathway on which all eligible material is either processed into fuel or losses or enters a steam cracker, and at which the eligible input material is liquid. It shall not be replaced by a generic pyrolysis oil or refinery yield. The following steps shall be documented in a traceable manner.

- Determine the maximum permissible boiling point of the receiving steam cracker or, where several steam crackers receive the material, determine the appropriately weighted value
- Determine the mass of eligible input that evaporates at this boiling point, using an appropriate standardised gas chromatographic boiling range distribution test, such as EN 15199-3:2021 or EN 15199-4:2021, or an equivalent method
- Correspondingly determine the mass of the total input, including ineligible proportions, that evaporates at this boiling point
- Where further processing steps before the steam cracker alter the boiling curve of the fraction that has not previously evaporated, determine the additional eligible and total output masses evaporating at each step and add them to the corresponding initial values
- Calculate the ratio of the eligible evaporating mass thus determined to the total evaporating mass
- Determine, on the basis of verifiable evidence, the actual total mass fed to the relevant steam cracker or steam crackers

- Multiply this ratio by the total mass actually fed to determine the eligible quantity deemed to be steam cracker input
- Establish the next calculation point at the steam cracker outlet for distributing this quantity among the various outputs

Only where the operator provides verifiable evidence that determining the evaporating eligible mass at the input or at the relevant intermediate steps is technically infeasible may the fallback rule expressly provided for in Article 7(4)(e) be used for the ratio: eligible input mass divided by total input mass. Missing data, costs or an existing upstream certificate alone do not justify this fallback rule.

Where part of the liquid material is further processed into propylene without passing through a steam cracker, the special route shall initially apply up to the separation of the propylene stream and the steam cracker stream. For the propylene stream, the allocated proportion at the separation point shall equal the eligible input proportion; thereafter, the proportional calculation under Section 7.1 applies with the factors from Section 7.3. For the steam cracker stream, the special route shall continue. In all other cases, Section 7.1 applies directly.

7.3 Output categories and exclusion of energy use

Each output stream shall be assigned to an output category before any reallocation. Classification shall be supported by actual characteristics, specifications and evidenced subsequent use. Merely designating a material stream as a "product" is insufficient.

Output category	Factor f_i	Evidence and treatment
Non-fuel	1	Further material processing into materials other than fuels is evidenced; losses do not belong in this category
Fuel	0	Outputs used internally for process energy or intended for subsequent fuel production are also excluded
Loss	0	Disposed quantities and other quantities to be treated as losses under the applicable method are excluded in full
Solid dual-use output	0	Not eligible under the allocation route of this module, for example solid pyrolysis residues classified accordingly
Liquid or gaseous dual-use output	0 to 1	Only the proportion remaining on the recycling pathway as supported by verifiable evidence; factor 0 without sufficient evidence

For liquid or gaseous dual-use outputs, the recipients, actual further processing route and the quantity proportion attributable to it shall, in particular, be evidenced. Appropriate downstream operating, delivery and use evidence may be used. The factor shall be updated when actual use changes. Quantities attributable to fuels, losses or unevidenced material use shall not be returned to a positive recycled content balance.

7.4 Limits on reallocation

Following initial allocation and the deductions under Section 7.3, a remaining permissible quantity may be redistributed to suitable outputs within the same calculation point. The sum of the quantities

allocated thereafter shall not exceed the preceding remaining total. Excluded fuel, loss or dual-use proportions shall not thereby become eligible again.

Every reallocation shall meet all the following conditions.

- A realistic chemical process enables the eligible input actually used to be converted into the output concerned
- The allocated quantity does not exceed the proportion of output constituents that can originate from the eligible input used
- The input and output at the step concerned do not both consist of polymers
- Allocation remains within the suitable output quantity actually produced and the permissible facility and time boundaries
- The initial calculation, excluded quantities, reallocation and technical justification remain documented and auditable

In particular, following renewed polymer production, the allocated proportion shall not be freely concentrated on selected polymer outputs during polymer-to-polymer processing. Mixing and further processing shall accurately reflect the proportion carried forward, evidenced losses and additional inputs.

7.5 Balancing period and available balances

A balancing period shall not exceed three months. Its start and end shall be established consistently in advance; a shorter initial period is permissible on entry. A negative balance of allocated quantities is prohibited at all times. Subsequent purchases or future production shall not retrospectively legitimise over-allocation that has already occurred.

Positive, evidenced and unused balances may be carried over to the immediately following balancing period. Origin, period of generation, quantity, evidence type and permissible use shall remain traceable. Material inventory and the allocation account shall be reconciled separately; a positive allocation balance without evidenced origin does not entitle a claim to be made. A carried-over quantity may be allocated only to an actually existing, technically suitable output within the same facility that has not already been attributed elsewhere.

Carry-over does not override the limits in Section 7.4. In particular, during polymer-to-polymer processing, carried-over balances shall not be used to freely increase the proportion derived from the materials actually used in selected products. Trading without alteration shall take over only the quantity linked to the specific delivery.

For each period: the opening balance plus evidenced receipts and newly permissible allocated quantities, less quantities transferred or otherwise used and necessary corrections, equals the closing balance. The initial conversion of an eligible input into allocated output shall not additionally be credited as an unchanged raw material receipt to the same account. Period-end closure and approval shall be documented.

7.6 Percentage claims and combination of evidence routes

For the flustix claim, the reference mass is governed by Section 9.8.3 of the main scheme: the full mass of the certified product or expressly certified component. Non-recycled layers, additives,

masterbatches and fillers shall remain in the denominator. A blanket de minimis deduction is not permissible.

Allocated PCR proportion in per cent = PCR mass permissibly allocated to the certified output / full mass of the certified reference object × 100. The underlying output quantity, product allocation and period shall be established. An arbitrarily chosen annual average or purchasing ratio without evidenced output allocation is insufficient.

Physically evidenced PCR content, physically evidenced PIR content and allocated PCR proportion shall be reported separately in the audit report for the same reference object, with their respective masses and percentages. Absent proportions shall be stated as zero. An additional total may be calculated only without double counting, shall identify the evidence types and, including all constituent values, shall not exceed 100 per cent. Stating a total value does not convert allocated quantities into physically present recyclate.

For statutory target claims, an additional, independent calculation shall be maintained using the legally applicable reference mass. Under Implementing Decision (EU) 2026/1425, this comprises the plastic parts of the relevant PET bottles, including the corresponding closures, labels and sleeves. A flustix value for an individual component, or for the total mass including non-plastic materials, shall not be adopted as the statutory bottle value without assessment.

Calculations and quantity accounts shall be maintained with sufficient precision and without rounding that increases balances. The presentation rule of the main scheme does not permit the evidenced quantity to be exceeded: a minimum content claim or a guaranteed value shown with the mark shall not exceed the proportion robustly verified. Statutory reporting and rounding rules apply separately to the respective statutory dataset.

8 Audits and independent verification

8.1 Audit scope and use of existing evidence

Audit types, organisation and reporting are governed by Section 7 of the main scheme. Wherever possible, the module shall be assessed in the same audit. A full reassessment of general requirements already equivalently evidenced is not required; scope, currency, reliability and outstanding gaps shall be documented.

The initial audit shall cover all facilities and calculation points relevant to the requested scope, either directly or through sufficiently equivalent and verifiable third-party evidence. Site sampling under the main scheme replaces neither a facility-specific mass balance nor any legally required individual verification. During surveillance, all balancing periods completed since the previous audit shall be considered for completeness and examined in depth on a risk basis. Unusual quantities, high allocated proportions, dual-use streams, reallocations and multiple certification schemes used in parallel shall receive particular attention.

Before an allocated proportion is first verified, at least one completed and reconciled balancing period with actual input and output data shall be available. A shorter initial period is possible under Section 7.5. Additional main scheme requirements for production history and batches, and statutory

conditions, remain applicable. Provisional certification permits neither forecast allocated quantities nor waiver of required declarations or verifications.

Traders who neither alter nor mix materials shall be assessed on the basis of their actual role, quantity transfers and document chain. A new calculation model or chemical process audit is not required for such transfer without alteration. The other main scheme requirements for trading, storage and sublicences remain applicable.

8.2 Additional statutory verification

Within the scope of Implementing Decision (EU) 2026/1425, Article 8(4) to (10) applies to the data specified therein. Operators calculating by mass balance under Article 6(3), whose input and output do not both consist of polymers, shall in particular meet the requirements for safeguarding evidence, the calculation system and facility-specific independent verification.

As a rule, verification shall be performed annually and on site by an independent verifier accredited under the relevant legal framework, in accordance with the applicable standard referenced in the EU Official Journal. The three-year cycle provided for therein applies to micro, small and medium-sized enterprises within the meaning of Recommendation 2003/361/EC; this classification, including relevant links between enterprises, shall be evidenced. The flustix surveillance audit under the main scheme remains unaffected.

Statutory verification shall cover at least activities and organisation, effectiveness of control systems, risk analysis, the resulting verification plan and sampling, missing or contradictory evidence, relevant input and output materials with suppliers and recipients, allocations, and discrepancies between accounting and the material balance. The team shall be technically competent and independent of the operator being verified.

A statutory verification certificate shall comply with at least Annex IV. It shall be valid for one year, or three years for the micro, small and medium-sized enterprises referred to above. Required copies shall be passed along the supply chain under Article 8(10). An existing flustix certificate may simultaneously serve as this evidence only where all statutory conditions and content requirements are actually fulfilled.

The risk-based remote or hybrid format and grace-period provisions of the main scheme shall not extend or replace statutory on-site obligations, verification intervals or certificate validity periods. A joint appointment and a common evidence set are permissible, provided every requirement is met and each respective result is clearly identified.

8.3 Additional audit report content

In addition to Section 7.4 of the main scheme, the report shall document the following points. The assessment matrix in Annex MA1 serves as a compact evidence index; these points may be added to an existing audit plan or report.

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- Certification scope, facilities, activities, processes and, where applicable, statutory intended use
- Evidence route for each stream, and applicable module requirements and those justified as inapplicable
- Calculation points, balance boundaries, periods assessed, operating data and relevant yields
- PCR and PIR origin, recognition of existing evidence and the result of the supplementary gap assessment
- Output categories, dual-use factors, fuel and loss deductions and, where applicable, steam cracker calculation
- Technical permissibility and extent of each relevant reallocation
- Quantity reconciliation, balances, carry-overs and controls against double counting, including parallel schemes
- Reference object, reference mass and separate physical PCR, physical PIR and allocated PCR percentages
- Required food contact and statutory verification evidence, with status and validity
- Assessed delivery declarations, certificate particulars, market communications, nonconformities and corrections

9 Certification and communication

9.1 Certificate content

In addition to Section 8.4 of the main scheme, the certificate or an unambiguously associated annex shall identify the module and version, covered facilities and activities, materials or products, the respective evidence route, the verified proportion and its reference object. Physically evidenced and allocated proportions shall be distinguishable. A statutory intended use may be stated only with an unambiguous legal basis and following a positive assessment of the applicable conditions.

For mass balance with allocation, the evidence route shall be expressly designated as “Chemical recycling – mass balance with allocation”. Wording that presents the percentage solely as physically present recycled content is impermissible for this route. For individual deliveries, the valid batch-specific particulars shall be authoritative; a certificate reference alone does not replace quantity and transfer documentation.

9.2 Claims concerning allocated recycled content

Where a percentage is communicated to the market for this evidence route, allocation and mass balance shall be apparent immediately alongside the claim. The permissible basic wording is: “XX % PCR from chemical recycling allocated through mass balance”. For a product with multiple evidence routes, the constituent proportions and their reference object shall be stated in a manner that precludes a claim of total physical content.

The claim shall not convey that the stated proportion of recycled molecules in the individual product has been analytically measured or physically identified. The statement “contains XX % recyclate” alone, an unqualified PCR or MIX claim, and a stand-alone percentage beside the mark are insufficient for allocated quantities. Product and packaging shall continue to be treated separately.

Each specific use of the mark requires approval under the scheme owner's licensing and design rules. Where the existing presentation of the mark does not enable the required distinction, it may be used for the allocation route only following the corresponding approval. An allocated proportion does not justify unsupported claims about climate impact, recyclability or suitability for food contact.

9.3 Validity and continuation

Module confirmation shall be linked to the certificate under the main scheme and is valid only for the scope positively assessed in each case. The validity of the main certificate extends neither legally required verification certificates nor supplier evidence. The impact of expiring, withdrawn or restricted evidence on the quantities and claims concerned shall be assessed without delay.

The certification body independently decides on granting, maintaining, reducing, suspending or withdrawing the specific certification. The scheme owner establishes general recognition and interpretation rules and scheme amendments, where appropriate in consultation with the certification body. It may neither override a negative conformity assessment nor waive statutory requirements.

9.4 Nonconformities and affected quantities

The substantive requirements of this module concerning eligibility, traceability, balance boundaries, output categories, allocation, excluded uses, balancing periods, non-negative balances, double counting, transfer evidence, required verification, percentage calculation and accurate claims are Category Type 1 requirements under the main scheme.

A nonconformity that materially impairs the validity, quantity or origin of the verified proportion is a major nonconformity. Affected quantities and claims shall not be newly verified or used until rectification has been verified. Incorrect declarations already issued shall be corrected and affected recipients informed. Under Section 8.3 and the other applicable rules of the main scheme, the certification body shall assess the consequences for existing certificates and the further action required.

A purely formal gap may be treated as minor only where origin, quantity accuracy and legal applicability are otherwise robustly established. Missing mandatory authorisations, a negative balance or an unevidenced eligible quantity shall not be disregarded by applying this classification.

10 Internal monitoring and changes

10.1 Quantity accounting and retention

The organisation shall integrate the module requirements into its documented quality management and factory production control in accordance with Section 9 of the main scheme. Additional certification to ISO 9001, ISO 14001 or EMAS is not required. Existing ERP systems or traceable spreadsheets may be used, provided approvals, changes and quantity relationships are auditable.

Facility-specific accounting shall record at least opening inventories and balances, actual inputs, origin proportions, allocated quantities received, calculation points, yields, all relevant output streams and their categories, factors and exclusions, permissible reallocations, sales and transfers, internal returns, corrections, closing inventories and carried-over balances. Allocated quantities shall be reconciled against purchasing, storage, production, sales and delivery declarations and approved by a designated responsible person.

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The organisation shall identify all certification and allocation schemes used in parallel. Common quantity registers or equivalent reconciliations shall prevent the same quantity from being sold more than once, allocated to several independent outputs or claimed again after transfer. Transfer of the same attribute along the same physical supply chain remains permissible where debits and credits are correctly recorded.

All origin, delivery, operating, calculation, use, assessment and correction records relevant to this module shall be kept available for at least five years, or longer where longer statutory or contractual periods apply. For these records, this period replaces the shorter general minimum period of the main scheme. The evidence shall be accessible to the certification body and competent authorities to the extent required in each case.

10.2 Notifiable changes and further development

Changes affecting the verified proportion or its supporting evidence shall be notified to the certification body without delay. These include processes and feedstocks, relevant suppliers, facilities, recycling pathways, calculation points, yields, output categories, dual-use applications, allocation models, recognised upstream certificates, statutory verifications and intended claims. The certification body independently determines the assessment scope required; the other rules of Section 8.10 of the main scheme apply additionally.

The scheme owner shall review the module rules in the event of relevant changes in legislation or technical foundations and decide on amendments and transitional provisions, where appropriate in consultation with the certification body. Statutory application dates and minimum requirements shall not thereby be deferred. Existing recognitions shall be assessed specifically against the amended requirements without repeating a full audit of matters already equivalently evidenced.

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Annex MA1 Assessment matrix for chemical recycling

The matrix serves as an additional evidence index in the existing audit report. Equivalent records suffice; an additional form is not mandatory. Evidence reference, sample and result shall be documented, and inapplicable points justified. The referenced requirements remain authoritative.

Assessment point	Additional evidence	Reference
Scope and legal purpose	Material, process, facility, evidence route; where applicable, product, country and legal attribution	1 to 3
Competence and accreditation	Team authorisation and training evidence; for statutory verification, relevant accreditation scope	4; 8.2
Input origin	PCR and PIR separated, eligible quantities evidenced, ineligible constituents distinguished	5.1; 6.2
Food contact	Applicable conformity route; required authorisations and declarations or status of outstanding matters	5.3
Process and balance boundaries	Flow diagram with facilities, calculation points, storage locations and subsidiary balances	6.1
Upstream certificates and supply chain	Validity and coverage of existing evidence; documented assessment of remaining gaps	6.2
Deliveries and trading	Batch reference, mass, evidence type, allocated quantity transferred; required declarations and certificates	6.3
Operating data and initial allocation	Inputs, outputs, actual yields, losses and consistent mass calculation	7.1
Steam cracker	Applicability of the special route; boiling point, test data, quantities fed to the cracker and, where applicable, evidenced fallback rule	7.2
Output categories	Complete classification; evidenced material use; fuel, loss and dual-use deductions	7.3
Reallocation	Technical pathway, quantitative upper limit and no reallocation for polymer-to-polymer processing	7.4
Accounts and periods	Maximum three months, non-negative balance at all times, evidenced carry-overs and completed initial period	7.5; 8.1
Product calculation	Full reference mass; physical PCR, physical PIR and allocated PCR percentages separated; separate target calculation where applicable	7.6
Statutory verification	Where applicable: on-site evidence, interval, certificate content and validity; evidenced SME classification for a three-year interval	8.2
Certificate and claims	Module, method, reference object and proportions unambiguous; allocation immediately apparent	9.1 to 9.3
Nonconformities and corrections	Affected quantities blocked, declarations corrected, recipients informed and actions assessed	9.4
Accounting and changes	Period reconciliation, approval, parallel schemes, returns, retention and relevant change notifications	10

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Annex MA2 Explanatory worked examples

The following examples illustrate the rules and are not alternative calculation methods. They assume fully evidenced inputs and a reconciled material balance without inventory changes. The special steam cracker route is not applied in the first example.

Example 1 Proportional initial allocation and excluded quantities

A calculation point processes 1,000 kg of relevant input, of which 200 kg is eligible PCR material. The eligible input proportion is 20 %. The actual outputs are recorded as follows.

Output	Mass kg	Initial allocation kg	Factor	Remaining kg
Non-fuel	600	120	1	120
Fuel	200	40	0	0
Disposed loss	100	20	0	0
Liquid dual-use output, 50 % evidenced material use	100	20	0.5	10
Total	1,000	200		130

70 kg is attributable to excluded uses and is no longer available. A maximum of 130 kg remains for allocation permissible under Section 7.4. Without reallocation, 120 kg remains verified for the non-fuel and 10 kg for the dual-use output. The excluded 70 kg shall not be transferred to the non-fuel.

Example 2 Separate product proportions and account management

A certified complete product weighs 1,000 kg and consists of components evidenced separately. One component contains 100 kg of physical PCR and 50 kg of physical PIR. Another carries an allocated quantity of 200 kg PCR permissibly carried forward under Section 7. This results, in relation to the complete product, in 10 % physical PCR, 5 % physical PIR and 20 % PCR allocated through mass balance. A combined claim of 35 % shall make this breakdown immediately apparent; it is not a physical recycled content of 35 %. A processor shall not freely concentrate the 200 kg on this component solely because an account credit is available.

The account initially contains an evidenced carry-over of 30 kg. After all exclusions, a further permissible allocated quantity of 220 kg arises during the period. Following transfer of the 200 kg, 50 kg remains. This is an account calculation only; the permissibility of each product allocation shall additionally be evidenced under Section 7.4. The chronological record shall demonstrate that the 200 kg transferred was already available beforehand; later receipts do not remedy a negative balance.

Non-recycled constituents remain fully included in the reference mass of 1,000 kg. Statutory targets may require an additional calculation with a separate reference mass and further eligibility conditions.

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